2015
Prince Edward Island
Lamps Recycling Program
Annual Report

Submitted to: **Prince Edward Island Department of Communities, Land and Environment**

Submitted by**:** **Product Care Association**

Date: June 30, 2016

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1.0 About Product Care Association

Product Care Association of Canada (PCA) is a federally incorporated, not-for-profit product stewardship association formed in response to stewardship regulations and is governed by a multi-sector industry board of directors. PCA has managed paint and other household hazardous waste industry stewardship programs since 1994. PCA operates lamp product stewardship programs in three other provinces besides PEI: British Columbia (BC), Manitoba (MB) and Quebec (QC). The BC, MB and PEI programs are branded as LightRecycle while the QC program is branded as RecycFluo.

PCA's members are the "brand owners" (manufacturers, distributors, first sellers and retailers) obligated by the Regulation under the lamps product. The Program is open to any brand owner to join.

PCA has an approved lamp product stewardship plan with the Prince Edward Island Department of Communities, Land and Environment under the Materials Recycling Regulations (the "Regulation") of the Environmental Protection Act. The PEI Lamp Recycling Program (the "Program") began in April 2015. PCA also operates the Paint Recycling Stewardship Program in Prince Edward Island.

1.1 Report Period

This report covers the Program from April 1, 2015 to December 31, 2015.

1.2 Program Summary

The PEI LightRecycle Program offers collection sites, free of charge, throughout the province where consumers and businesses can bring burned out lamps. Most collection sites are operated by Island Waste Management Corporation (IWMC) under contract to PCA. In addition to the IWMC collection sites, a retailer, Sherwood BMR, in Charlottetown, is also a collection site under the Program.

Environmental handling fees (EHFs) applied to each regulated lamp product that is sold into the province provide funding to manage the Program (See Appendix 1 – PEI's 2015 LightRecycle Environmental Handling Fee Rates). The Program allows residents and businesses of PEI to return burned out whole lamps to any of the six IWMC collection sites. The retailer collection site accepts only residential lamp products.

PCA supplies collection sites with standard recyclable collection boxes and metal drums for collection of debris from broken lamps. A hauler contracted by the Program collects the filled boxes on pallets from the collection sites and delivers collection supplies. The full collection containers are shipped to a processor for recycling. Additional elements of the Program managed by PCA include revenue management, communications and administration.

1.3 Accepted Products

The Program is designed to collect and manage end-of-life intact (whole) lamps. The Program includes the following common categories of lamps, whether they are marketed for residential, industrial or commercial purposes. This list is subject to change by PCA.

- Fluorescent Tubes – Fluorescent tubes come in different lengths (4 feet, 8 feet, etc.), diameters (T5, T8 and T12) and light output. The majority of tubes are straight but some may be curved or shaped.
- Compact Fluorescent Lamps (CFLs) – Fluorescent bulbs that are typically similar in size and are intended to replace an incandescent (traditional) light bulb, including pin-type sockets, covered CLFs and various output wattages
- High Intensity Discharge Lamps (HID), non-mercury and mercury containing lamps – Includes mercury vapour, metal halide, high or low pressure sodium, UV lamps
- Incandescent and Halogen lamps – Filament lamps of all shapes, sizes and wattages
- Light Emitting Diode (LED) lamps – Solid-state lamps used for speciality purposes and conventional lighting applications

Lamp products can be sold as replacement lamps or integrated into a product intended to illuminate an area (such as a fixture, a flashlight, etc.). When sold integrated into such a product, the lamp portion of the product must be designed to be removed from that product by the end user in order to be recycled. Lamps that are sold integrated into products that meet this requirement are included in the program.

The Program is designed to collect and manage whole lamps and not crushed lamps. A limited amount of incidental breakage of lamps is accepted by the Program, provided the broken lamps are packaged in accordance with the requirements of the Program.

The Program includes lamp products manufactured by existing producers as well as orphan products (those that are no longer in production or which the manufacturer is no longer producing) if their function was the same as products accepted in the Program.

Non Program Material

Non-program materials are products other than the lamp products listed above. Minimization of non-program material will be achieved through a comprehensive program of public education, signage, collection facility staff training, as well as effective regulatory enforcement against those who abandon products at or near collection facilities. Non-program material includes, but is not limited to the following:

- All types of fixtures
- Ballasts
- Any other lighting products (Products containing lights with a primary purpose that is not to illuminate or assist in the illumination of space. For example, a. germicidal lamp)
- Lamps integrated into products that are not intended for removal/replacement by end users. Due to technological modifications, this exclusion may be subject to review.

2.0 Brand Owner Sales Information

Program members reported the sale of program products in PEI from April 1 to December 31, 2015, for a total of 487,686 units as shown below in Table 1.

Table 1: Total Units Sold by Category

	Fluorescent tubes	Compact Fluorescent Lights (CFL)	LED	HID and Other	Incandescent/ Halogen	Mini bulbs package	Total
Units	67,236	79,047	42,021	4,448	283,221	11,714	487,686

Note: Mini bulbs package can be LED, incandescent or halogen.

3.0 Collection

The following section provides the total amount of lamps collected in PEI, as well as the location of the collection sites.

3.1 Total Amount of Lamps Collected

Table 2 shows the total number of lamp units by category that were collected and processed by the Program.

Table 2: Total Units of Lamps Collected in 2015

	Fluorescent tubes	Compact Fluorescent Lights (CFL)	LED	HID and Other	Incandescent/ Halogen	Total
Units	33,185	4,742	39	1,041	5,873	44,880

3.2 Collection Sites

As of December 31, 2015, seven collection sites participated in the Program. Six collection sites are operated and managed by IWMC and one collection site is a retail location. See Table 3 for the list of collection sites. Appendix 2 – Product Care Association's Collection Map contains a provincial map of the collection site locations.

Table 3: 2015 PEI Lamp Collection Sites

Collection Site	Address	City
GreenIsle	8 Superior Crescent	Charlottetown
Brockton	2202 Dock Road Rte # 150	Brockton
New London	10142 Rte #6	New London
Murray River	378 Cape Bear Road Rte #18	Murray River
Dingwells Mills	100 Selkirk Road Rte #309	Dingwells Mills
EPWMF	29786 Rte #2	Wellington Center
BMR Charlottetown	423 Mt. Edward Road	Charlottetown

4.0 Processing

4.1 Lamps Processed

All lamps collected through the Program were sent to a processor in Quebec for processing. In 2015, a total of 38 skids of burned out whole lamp products (44 880 lamps) were processed.

During the reporting period, all lamp products collected were processed. The Program's processor is required to conform to the Product Care's Processor Standard. The Processor Standard can be found in Appendix 4.

4.2 Disposal Method Descriptions

The following sections describe each method the Program used to reuse, recycle, or otherwise treat or dispose of lamp products.

Reuse:

The Program is designed for end-of-life lamp products that no longer work and cannot be reused.

Recycling:

Collected Program Products are broken down into their component parts, under a controlled environment. The resulting glass, ceramic and metal components are recovered as commodities. The metal components (including electronics) are sent to smelters. The glass and ceramics are sent to a glass recycler to be used for insulation material and sand blasting.

Secure Landfill

During the separation of the components, the mercury and the phosphate powder are collected in drums. The contents of the drums are sent to a waste management company in Quebec for secure landfilling once it has been encapsulated into a concrete-like material. Although the mercury can be removed from the phosphate powder by retort, the market for recycled mercury has been greatly reduced in the last few years due to regulatory restrictions. These restrictions include a US ban on mercury exports, which has limited the availability of this disposal method.

4.3 Design for Environment

The lighting industry is pursuing innovations in product development that strike a balance between sustainability, health & safety and performance. The competition of the lamps market encourages manufacturers to develop products containing less material to help reduce costs, maximize product performance relative to energy consumption, and increase the life span and comfort of use for consumers. All these efforts lead to natural market-driven improvements.

Increased public awareness of the presence of mercury in certain lamp products is driving consumers to encourage manufacturers to reduce the quantity of mercury used in lamp products. As a result, mercury in lamp products has significantly decreased in previous years, as shown in Table 4.

Table 4: Average Content of Mercury in Lamp Products Over Time : 2006, 2010 & 2013

Types	Average mercury content (mg) 2006[1]	Average mercury content (mg) 2010[2]	Average mercury content (mg) 2013[2]
CFL	3.7 mg	2.3 mg	1.6 mg
Fluorescent tubes	7.6 mg	7.1 mg	5.4 mg
HID	37 mg	43 mg	18 mg

[1] Source : Electro-Federation Canada.
[2] Source : GE General Electric

5.0 Communications and Education

PCA employed various tactics to educate consumers in accordance with regulatory requirements. The following sections provide details regarding the communication and education program for 2015.

Note that as the PEI LightRecycle Program became operational on April 1, 2015, tactics reported below do not capture a full calendar year of activities.

5.1 Website

PCA operates a website for all of its LightRecycle programs, LightRecycle.ca, through which it engages program end-users through numerous communications platforms. LightRecycle.ca is home to the following bilingual content for the Prince Edward Island LightRecycle program:

- Depot finder (a map displaying locations of the collection sites)
- Depot hours of operations
- Program product list
- Program FAQs, including the safe handling of mercury-containing lamps
- Information for large volume generators of accepted products

An estimated 33,292 unique visitors utilized Lightrecycle.ca from April 1, 2015 (program launch date) to December 31, 2015. Additionally, LightRecycle.ca is linked from the Island Waste Management Corporation's website.

5.2 Point of Sale (PoS) and Point of Return (PoR) Material

In 2015, PCA designed and distributed PoS materials for display by collection sites. The following materials were printed and mailed to collection sites and are available for reorder through our online order form.

- 11x17 Posters
- 4x3 Outdoor Collection Site signage

5.3 Program Hotline

PCA operated a bilingual “hotline” with a toll-free telephone number 1-888-772-9972 by which consumers were able to obtain information about the program. In addition, Island Waste Management Corporation (IWMC) also responded to all consumer inquiries regarding the Program through a telephone, email and online service system.

5.4 Digital Advertising

PCA pursued two Atlantic Canada targeted digital campaigns via YP Group and Multiview, two leaders in the dissemination of search-query informed online advertising. The campaigns included:

- Syndicated Facebook posts, targeted digital display ads (based on relevant search criteria related to light recycling), and smart digital display advertising (re-serving advertising impressions to a pre-qualified audience based on their browsing behaviour). The Facebook advertising campaign pursued a “gated” strategy, which is to say, content viewable by residents of Prince Edward Island was relevant to that audience specifically, and was not necessarily seen by audiences in other provinces
- Extensive SEM advertising with a specific focus on lighting industry professionals, contractors, relampers, building managers, etc.

5.5 Partnership

PCA has contracted with Island Waste Management Corporation (IWMC) to promote the Program to the public through the following methods:

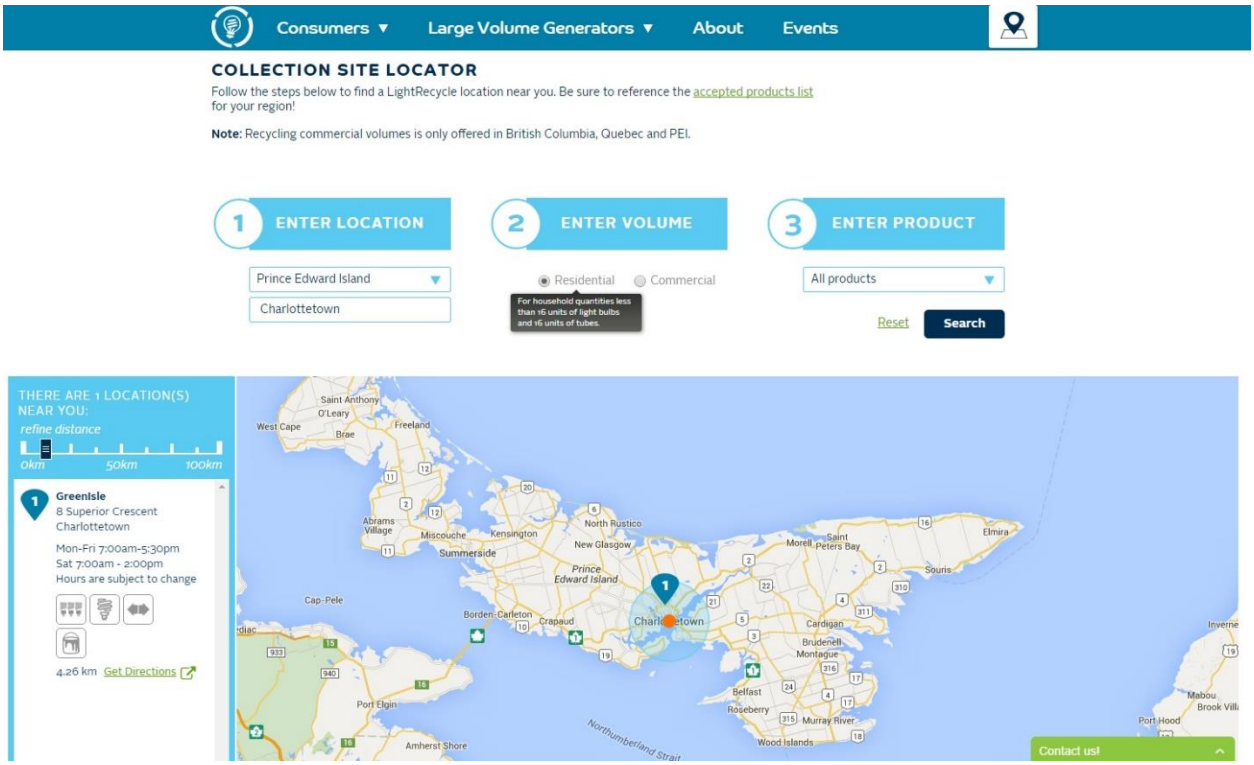
- A link to Regeneration.ca is available through IWMC’s website
- Distribution of a biannual newsletter to each household in PEI
- Newspaper columns, as applicable
- Promotion through IWMC’s customer service helpline.

Appendix 1 – PEI's 2015 LightRecycle Environmental Handling Fee Rates

Accepted Lamp Products	2015 Rates
Fluorescent Tubes measuring ≤ 2 feet	$0.30
Fluorescent Tubes measuring > 2 feet and ≤ 4 feet	$0.50
Fluorescent Tubes measuring > 4 feet	$1.00
Compact Fluorescent Lights (CFL)/Screw-in induction lamps	$0.20
Light Emitting Diodes (LED)	$0.15
High Intensity Discharge (HID), Special purpose and Other	$1.10
Incandescent / Halogen	$0.05
Miniature Bulb Package	$0.10

Appendix 2 – Product Care Association's Collection Map

Below is a snap shot of what the new collection site locator tool available on LightRecycle.ca.



Appendix 3 – PoS and PoR Materials

Program Brochure

Program Funding

The LightRecycle program is funded by fees submitted to LightRecycle by its industry members, on the sale of new light bulbs and tubes. The fees are used to cover the program costs, including managing the collection, transportation, and recycling systems for returned products.

The Life Cycle of a Residential-Use Light Bulb

Benefits of Recycling Lights

While that one burnt out bulb may seem trivial at first, know that when you recycle it, you contribute to a growing movement that is making a significant positive impact on our environment. When in doubt about whether to recycle your lights or not, just remember: every bulb diverted from the landfill counts! In the case of CFLs and fluorescent tubes, recycling keeps mercury out of our natural environment, while all bulbs contain valuable materials such as glass and metal that can be repurposed as new products.

About LightRecycle

LightRecycle™ is a family of recycling programs that are operated by ReGeneration (née Product Care Association), a non-profit industry association, specializing in product stewardship on behalf of the manufacturers, distributors and retailers of products that are regulated under provincial Extended Producer Responsibility (EPR) regulations.

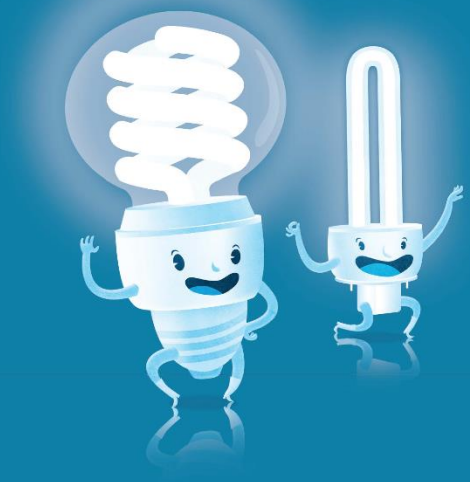
In essence, we are a passionate group of environmentally-minded solutions providers who want to help good people, like you, change the world for the better. We do that by making sure that your spent or unwanted lights end up in the recycling stream and not in the trash.

LightRecycle

LightRecycle operates in British Columbia, Manitoba, Ontario, Québec (as RecycFluo) and Prince Edward Island.

www.lightrecycle.ca | 1-888-280-8111

LightRecycle



PEI's Recycling Program for Lights

RESIDENTIAL · COMMERCIAL · INDUSTRIAL · INSTITUTIONAL

www.lightrecycle.ca
1-888-280-8111

LightRecycle Collection Site Poster

Appendix 4 – IWMC

FOR YOUR INFORMATION

1	Plastic bags are not compostable. Use paper bags or contact IWMC for info.
2	Only clear bags accepted for waste. Please do not use non-transparent or blue bags for waste material. 
3	**PLEASE RECYCLE!** Paper products go in Blue Bag #1. Ensure milk cartons and recyclable plastic, metals & glass are clean & dry and placed in Blue Bag #2. Bundle cardboard and place with larger metal items beside your blue bags.
4	Maximum cart weight is 220 lbs.
5	**NO ASHES IN CART!** Place ashes in cardboard box beside appropriate cart.
6	Call IWMC for cart warranty repair.
7	**ELECTRONIC MATERIAL IS RECYCLABLE!** Take to a Waste Watch Drop-Off Center. **NO CHARGE.**
8	OTHER:

Contact IWMC for more information at 1-888-280-8111 or www.iwmc.pe.ca

JUNE/15

ANNOUNCING ... New Programs in 2015

USED OIL & GLYCOL PRODUCTS:

- Oil fluid & Oil containers, oil filters
- Automotive antifreeze & containers
- Aerosol containers for propelled lubricant & brake cleaner

LIGHT BULBS:

- **NEVER** break bulbs
- Any type of bulb that can be removed from fixture

DO NOT PLACE IN WASTE!

TAKE TO A WASTE WATCH DROP-OFF CENTER (FREE DISPOSAL for homes & businesses)

MEDICATIONS RETURN:

- Prescription medication, over-the-counter drugs and natural health products (like vitamins)
- **RETURN TO A PARTICIPATING PHARMACY – FREE**

SHARPS:

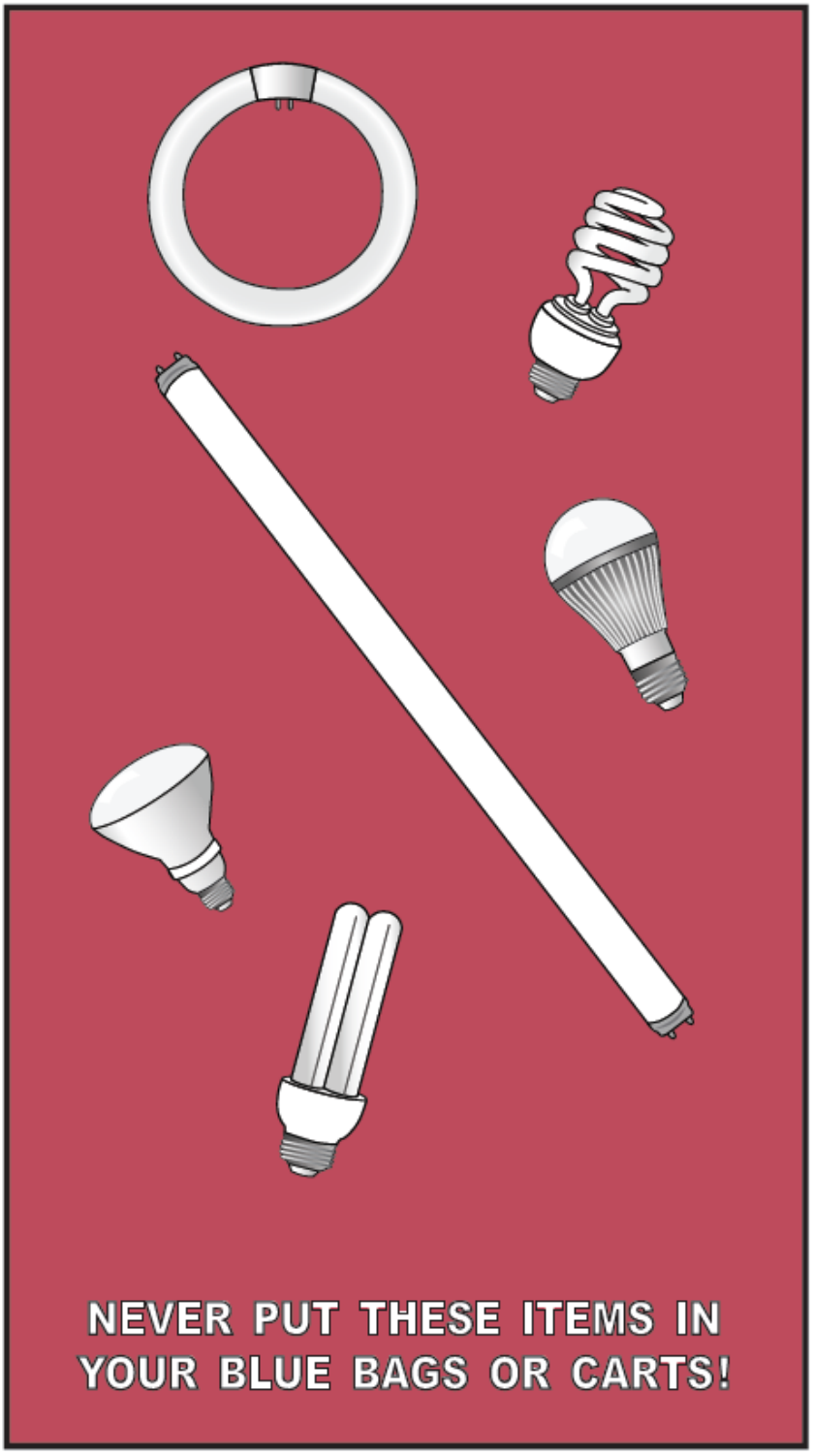
- Needles, syringes, needle tips, lancets, insulin pens & other used sharps

  Use an approved container available FREE at participating pharmacies and return container to pharmacy for FREE disposal

DO NOT TAKE MEDS OR SHARPS TO A WASTE WATCH DROP-OFF CENTER.

Visit www.healthsteward.ca for pharmacy info.

SPECIAL DISPOSAL



Product Care

WASTE WATCH UPDATE

... brought to you by The Journal Pioneer

RECYCLING OUR LIGHTS

Last year more than 6.7 million lights were collected by **LightRecycle™** programs in Canada. That's 6.7 million items containing recoverable materials such as glass, metal, or phosphor powder that were kept out of landfills and waterways and remanufactured into other uses.

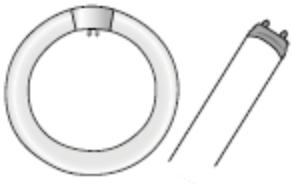
One burnt out bulb may seem trivial at first, but remember ... when you recycle it, you are making a positive impact on our environment. ***Every bulb counts!***

Any type of light bulb that can be easily removed from the fixture or product (i.e. flashlight) is recyclable and must be taken to a Waste Watch Drop-Off Center for recycling.

DO NOT PUT LIGHT BULBS IN WASTE!

Accepted Lights from Homes & Businesses (at no charge)

Compact Flurorescents (CFLs)



Fluorescent Tubes

Incandescents & Halogens

LEDs

High-Intensity Discharge Bulbs

How Are Lights Recycled?

Lights are sorted by type, then staged for processing. They are then crushed and separated into various components. Crushed glass finds new life in such applications as insulation or sandblasting material. Metal ends/ components from bulbs are remanufactured into metal products.

Mercury-bearing phosphor powder is distilled from fluorescents and other bulbs containing these elements in order to separate the mercury. The mercury is then safely contained and is directed back into the market for use in the lighting, medical and other purposes.

For additional information: Visit our Website at **www.iwmc.pe.ca**
Phone Customer Service Centre (Toll Free) **1-888-280-8111**
or Email our Info Line at **info@iwmc.pe.ca**
ISLAND WASTE MANAGEMENT CORPORATION

Appendix 5 – PCA Processor Standard

PCA LIGHTRECYCLE LAMP PROCESSOR STANDARD

2/15/2014

Product Care Association

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PCA LIGHTRECYCLE LAMP PROCESSOR STANDARD

The PCA LightRecycle Lamp Processor Standard defines the minimum requirements for business and organizations to become an approved processor under Product Care Association's Lamps and Lighting Equipment Stewardship Program. This standard intends to ensure that lamps are managed and processed in a manner that will adequately safeguard the environment and worker health and safety. It also ensures that data is collected in order to track the materials. Product Care reserves the right to review and revise these standards on an on-going basis.

BACKGROUND

Many types of lamps are commonly used and are considered safe under normal conditions of use. The processing of lamps however requires some safety controls and measures, especially for lamps containing mercury, which is a highly toxic substance. The processors will be responsible for processing intact lamps from the program but should also have the ability to handle and process lamps that are incidentally broken. The processing and recycling of lamps typically involves some sort of mechanical dismantling and separation in which the lamps are broken. During the process of recycling lamps, if systems and procedures are not in place, there is potential risk of negative impact on the environment and employee health and safety. All processors and downstream processors (until the point where the components of the lamps become commodities usable to produce new products or the final disposition for disposal) will be required to be approved under this standard. Prior to becoming an approved processor, the processor will have had to go through the program's audit process as well as having audits performed for its downstream processors. It is the responsibility of the primary processor to ensure that program materials are sent to only approved downstream processors. The program will ensure ongoing compliance with the standard through the audit system.

DISCLAIMER

The PCA Lamp Processor Standard is not intended to absolve processors from the responsibility of compliance with any federal, provincial and/or municipal legislation and regulations applicable to the management of mercury-containing or other lamps, or the business operation of the processor. Nor is it intended to constitute or to provide legal advice. It is the responsibility of the processor to be aware of and abide by all such legislation and regulations.

PCA LIGHTRECYCLE LAMP PROCESSOR STANDARD

1. GENERAL REQUIREMENTS

All Processors shall:

1.1. Possess a valid business license

1.2. Comply with all applicable federal, state, provincial and local/ municipal laws and regulations including but not limited to:

- Environmental Management Act
- Provincial Waste Management Act & Regulations
- Hazardous Waste Regulation
- Transportation of Dangerous Goods Act & Regulations
- Canadian Environmental Protection Act– Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulation
- Basel Convention on Control of Transboundary Movements of Hazardous Waste and Their Disposal
- Air emissions and effluent discharge bylaws and regulations
- U.S. Resource Conservation and Recovery Act
- Provincial/State Health and Safety Regulations

1.3. Prohibit the export of hazardous waste throughout the recycling chain to non-OECD/non-EU countries

1.4. Possess Comprehensive or Commercial General Liability Insurance including coverage for bodily injury, property damage, complete operations and contractual liability with combined single limits of not less than $2 million per occurrence and $2 million general aggregate

1.5. Possess Environmental Liability Insurance with combined single limits of not less than $2 million per occurrence and $2 million general aggregate

1.6. List Product Care Association on the insurance policies (in 1.4 and 1.5) as an additional insured party

1.7. Possess and maintain in good standing workers compensation coverage as required under the Workers' Compensation Act of the designated program province and its

Regulations or possess workers compensation coverage through either a provincial/state program or through private insurance policy

1.8. Maintain all records for a minimum of 3 years, including but not limited to manifests, other shipping documents, waste records and chain of custody for all lamp materials processed

1.9. Possess a valid provincial/state approved permit, plans, and approvals, as applicable

1.10. Possess a valid waste generator number or EPA identification number, as applicable

1.11. Possess a valid air emission permit and effluent discharge permit, as applicable

1.12. Maintain a documented closure plan that identifies at a minimum the financial requirements upon closure and the financial mechanism for ensuring the availability of such funds, such as a security or performance bond or other similar financial instruments, and how the existing inventory of products/waste will be managed

1.13. Maintain a process to provide written notice of closure to Product Care with a minimum of 90 days advance notice

1.14. Maintain a process to provide notice to Product Care of any incidents that required the assistance of first responders within 24 hours of the occurrence. Provide written notice of any regulatory orders or fines within 48 hours of receiving such orders or fines.

1.15. Allow PCA or its agent's access to the processors facility to conduct site inspections and audits in order to verify conformance with the PCA LightRecycle Lamp Processor Standard. The processor agrees to provide any documentation requested by PCA or its agents

2. ENVIRONMENTAL HEALTH & SAFETY (EHS) MANAGEMENT SYSTEM

All Processors shall implement and maintain a documented environmental health and safety management system (EHSMS) to ensure the identification and adequate controls over environmental and health & safety impacts associated with the operations of recycling lamps. Notwithstanding any legislative requirements, the EHSMS, shall at a minimum consist of the following:

2.1. Maintain a written policy approved by senior management outlining corporate commitment to environmental management and continuous improvement

2.2. Maintain a summary of current applicable statutes, regulations and other applicable requirements such as this standard that are relevant to the processor's operations

2.3. Maintain a documented process to identify, track, assess and ensure compliance with any changes to regulatory and other applicable requirements including this standard, on an ongoing basis, including but not limited to:

- Environmental regulations
- Waste and hazardous waste regulations
- Occupational health and safety regulations
- Air emissions and water discharge regulations
- Transportation regulations

2.4. Implement and maintain an emergency response plan to prepare for and respond to emergencies including fires, spills, and medical

2.5. Maintain a documented process to record and track the results of an annual risk assessment of the potential environmental and health & safety impact of the operation and any corresponding corrective and/or preventive actions taken

2.6. Maintain a documented process for employees to report, record and investigate any accidents, injuries, spills, near misses and other incidents that could have resulted in an injury or an unauthorized release to the environment and any corresponding corrective and/or preventive actions taken

2.8. Maintain a documented process to communicate to employees the results of the risk assessment and investigations of any injuries, accidents, near misses, spills and unauthorized releases and the corresponding corrective/preventative actions taken

2.9. Conduct and document a review of the EHSMS, by senior management, to ensure adequacy and effectiveness of the EHSMS. The review is required to be conducted at a minimum on an annual basis or:

- whenever new lamp processing equipment is installed;
- whenever existing lamp processing equipment is modified such that the modification may impact the environment and/or employee health & safety or;
- whenever there is substantial re-organization of personnel in lamp processing

3. ENVIRONMENTAL HEALTH & SAFETY (EHS) RISK ASSESSMENT

An EHS risk assessment shall be conducted on an annual basis to identify and assess the environmental and health and safety impacts of the entire operations. Should the operations undergo significant changes that introduces potential new risks/hazards or increases the severity of such hazards, a new risk assessment must be conducted; either task specific or for the entire facility, dependent on the amount of change to the operations. The EHS risk assessment shall include at a minimum the following:

3.1. A process to identify physical and chemical hazards and to assess the probability and severity such hazard

3.2. A process to identify areas with potential negative impacts to the environment and to assess the probability and severity of such hazard

3.3. A process to determine the appropriate level of control necessary to eliminate or effectively control the hazards

3.4. A process to identify the frequency and need for air quality monitoring/assessment, noise level monitoring/assessment, medical surveillance and the development and implementation of an exposure plan as required by regulation.

3.5. Maintain a documented process to communicate to employees the results of the EHS risk assessment and the process involved in assessing the environmental and health and safety impact of the entire operation

4. ENVIRONMENTAL HEALTH & SAFETY (EHS) CONTROLS

All processors shall ensure that controls are in place to address the risks identified through the risk assessment process to prevent accidents, injuries, chemical exposure and unapproved releases to the environment. All processors, at a minimum shall:

4.1. Develop, maintain and document a training program for the handling and management of lamps including but not limited to:

- Potential hazards and risks associated with handling of lamps
- Proper and safe handling & storage of lamps
- Proper use of processing and safety equipment including proper use and care of personal protective equipment

- Proper spill/breakage clean up and management
- Safety and emergency procedures
- Accident/injury reporting and management
- Emergency response plan

4.2. Implement and enforce hygiene practices, eating, drinking, smoking restrictions and decontamination procedures to minimize risk of exposure to hazardous materials

4.3. Implement and maintain good housekeeping procedures

4.4. Provide adequate personal protective equipment and spill response equipment

4.5. Provide physical guards to protect against mechanical hazard and other physical hazards

4.6. Conduct a baseline sampling program for noise level monitoring, air quality monitoring, effluent discharge and hazardous waste delisting and develop a sampling program based on the risk assessment and baseline testing results

4.7. Implement a medical surveillance program as needed based on the risk assessment and the baseline test results

4.8. Conduct and document on an annual basis, testing of the emergency response plan, review results, and revise as necessary

4.9. Conduct fire safety equipment inspection and testing at a minimum annually

4.10. Implement and document an equipment inspection and maintenance schedule for any mechanical processing equipment and mechanical systems/apparatus engineered to reduce emissions and worker exposure

4.11. For automated equipment, ensure there is an emergency shut-off system and that it is tested regularly.

4.12. Designate a person in charge of ensuring environmental health and safety controls are adequate and effective within the entire operations of the facility and provide Product Care with the name, job title and responsibilities of the designated person. Notify Product Care within one week of any change.

5. MATERIAL HANDLING

All Processors shall:

5.1. Maintain adequate security measures to prevent unauthorized access to premise and storage areas

5.2. Ensure that unprocessed lamps and hazardous components are stored and processed in an area that is protected from environmental elements and away from drains and catch basins

5.3. Ensure that lamps are processed within 90 days of receipt and all resulting downstream products/commodities are shipped to approved downstream processors within 120 days of receipt

5.4 Provide the program with written 90 day notification of intentions to change downstream processors and await written approval from program prior to changing downstream processors

5.5 Maintain evidence of permits or licenses of transporters utilized for transportation of hazardous waste

5.6 Maintain evidence of permits/approvals/license of downstream processors/service providers utilized for hazardous waste management

5.7 Commit to a system of continuous improvement with respect to moving materials up the recycling hierarchy and to notify the program of any new opportunities or technologies to move the final destination of materials up the pollution prevention hierarchy.

6. ADMINISTRATION

All processors shall:

6.1 Maintain and document a tracking system for the facility that includes at a minimum the following information at the receiving and processing stages for all program materials on a monthly basis:

- Date shipment was received
- Generator name corresponding to shipment
- Bill of lading or manifest number corresponding to each shipment
- Quantity of lamps per each lamp technology corresponding to each shipment
- Verification that shipment was inspected by appropriate personnel and corresponds to Bill of Lading/Manifest information

6.2 Maintain and document a monthly Inventory of lamp volumes at the facility that includes at a minimum the following information :

- Date shipment was received
- Generator name corresponding to shipment
- Bill of Lading or Manifest Number corresponding to each shipment
- Quantity of lamps per each lamp technology corresponding to each shipment
- Weight of constituent components in Inventory

6.3 Maintain and document a monthly and annual record of the downstream flow and handling of lamps from receipt at processor's facility to each point of final disposition, including details on how the various components are processed at each point and the amounts /percentages sent to each downstream processor. Product Care will treat specific downstream processor names as confidential.

6.4 Provide certificates of recycling for all program material processed on a monthly basis

6.5 Provide training with respect to proper completion of shipping documents and record keeping to applicable and appropriate personnel

6.6 Designate a person in charge of maintaining required documents and provide Product Care with the name, job title and responsibilities of the designated person.

7. DEFINITIONS

Mercury-containing lamps – are compact fluorescent lamps (CFL), fluorescent tubes, high intensity discharge lamps (HID) and other lamp technologies that use mercury to generate light.

7.1 "Downstream Processor" means an entity that receives material from a primary recycler or other downstream processors for additional processing and/or disposition.

7.2 "Generator" means an entity possessing end-of-life lamps and from which a shipment to the processor originates

7.3 "Inventory" refers to LightRecycle program products received by the facility but not yet processed, or the constituent components not yet shipped to downstream processors for additional processing

7.4 "Point of final disposition" means a point in the downstream flow of materials where the separated materials generated from the processing of lamps become commodities used to produce new products or the materials are disposed of.

7.5 "Pollution prevention hierarchy" is as follows in descending order of preference, such that pollution prevention is not undertaken at one level unless or until all feasible opportunities for pollution prevention at a higher level have been undertaken:

a. reduce the environmental impact of producing the product by eliminating toxic components and increasing energy and resource efficiency;
b. redesign the product to improve reusability or recyclability;
c. eliminate or reduce the generation of unused portions of a product that is consumable;
d. reuse the product;
e. recycle the product;
f. recover material or energy from the product, or
g. otherwise dispose of the waste from the product in compliance with all applicable federal, state, provincial and local/ municipal laws and regulations

7.6 "Processing" is the process by which end-of-life lamps are manually or mechanically broken down into constituent parts and recoverable components are retrieved

7.7 "Processor" is an entity that manages the processing of end-of-life lamps and ensures recoverable components are sent to downstream processors for additional processing and/or final disposition

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